

REMARKS

The Office Action dated May 11, 2004 has been fully considered by the Applicant.

The rejection of Claims 1, 5 through 8 and 10 under 35 U.S.C. §103(a), as now amended, as unpatentable over Choi (Patent No. 5,163,981) in view of Miles (Patent No. 5,221,527) is respectfully traversed.

Claim 1 has been amended to clearly convey that the thermal oxidizer is combined and integrated with the reboiler but fluidly separate from the reboiler. Claim 1 has also been amended to include the limitations of:

(g) means to regulate said external tube surface temperatures by a controlled venting mechanism having a venting mechanism in a vent stack of said thermal oxidizer chamber coordinated with a vent mechanism in said reboiler vent stack.

The Examiner contends that Choi shows an arrangement wherein “non-condensable vapors are then passed to a firetube inside the reboiler, where they are burned, or ‘thermally oxidized’, and the combustion gas is sent through pipes, or ‘heat recovery tubes’, which heat the glycol absorbent in the reboiler.” (Office Action, page 4) This is distinct from the present invention where the thermal oxidizer combustion chamber is separate from the reboiler. In Choi, the thermal oxidation described by the Examiner is within a firetube inside of the reboiler.

As now clearly conveyed, the thermal oxidizer combustion chamber is separate and distinct from the reboiler.

Neither Choi nor Miles nor the combination shows or discloses this limitation. In summary, the combination of Choi and Miles, taken together, does not achieve the invention as now set forth in Claim 1.

The Examiner, on page 4 of the Office Action, acknowledges that Choi does not disclose placing a vaporizer to vaporize residual liquid in the vapors coming from the condenser and still. The Examiner contends that Miles teaches a similar process where contaminants in water are vaporized in a reboiler superheater to subsequently be sent to a burner.

It is respectfully submitted that Miles is not a similar process to the present invention. Miles sends a vaporized mixture to an in-line arrester, a superheater 66 and then to a liquid collection chamber and an aspirator for a burner in a flare system. This would not be similar to the present invention.

Moreover, it is untenable to combine Miles with Choi. The Examiner contends that it would have been obvious to one of ordinary skill in the art to place a superheater (vaporizer) before the burner of Choi '981 because Miles '523 teaches that the superheater promotes oxidation and complete combustion. Miles does teach "complete combustion" of the vaporized mixture, but in the next-to-last paragraph of the BACKGROUND OF THE INVENTION, Miles teaches that "the contaminants may be incinerated without production of odors or visible emissions". That is actually closer to the truth. This is a distinction between the two inventions, that is the quality or completeness of the destruction of the contaminants of the vaporized mixture. However, there is no suggestion or motivation in the references themselves to combine the two references together. It is also untenable to combine Miles with Choi because they are diametrically opposed in their methodology. Choi CONDENSES virtually all of the effluent while Miles seeks to VAPORIZE virtually all of the effluent. What isn't really quantified anywhere in these patents, is that the bulk of the effluent is water or steam depending on how much of it you vaporize or condense. In almost all applications, that percentage of water, regardless of state, will be above 98% of the total effluent.

The Court of Appeals for the Federal Circuit has repeatedly held that under Section 103, teachings from various references can be combined only if there is some suggestion or incentive to do so. ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F2d 1572, 221 USPQ 929 (CAFC 1984).

Stated another way:

It is impermissible, however, simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps...The references themselves must provide some teaching whereby the applicant's combination would have been obvious. In re Gorman, 18 USPQ2d 1885 (CAFC 1991).

The Examiner is required to follow the law as set forth by the Federal Circuit. In summary, the combination of patents to achieve the claims of the present invention is untenable.

Claims 5 through 8 and 10 are dependent on Claim 5 and believed allowable for the same reasons. The Examiner acknowledges that Choi does not teach controlling the temperature of the heat recovery tubes or of the reboiler. Since the combination of references, taken together, do not teach or disclose such a limitation, the rejection is improper.

The rejection of Claims 1, 5 through 8 and 10 under 35 U.S.C. §103(a) as unpatentable over Anderson (Patent No. 6,251,166) in view of Miles is respectfully traversed. The Examiner acknowledges in the Office Action (page 5) that Anderson does not disclose placing a vaporizer to vaporize residual liquid in the vapor stream coming from the separator. The Examiner contends that Miles teaches in a similar process where contaminants in water are vaporized in a reboiler to subsequently be sent to a burner, directing the contaminants in water from the reboiler to a superheater which reduces liquid carryover into the burner.

It is respectfully submitted that Miles is not a similar process to the present invention. Miles sends a vaporized mixture to an in-liner arrester, a superheater 66 and then a liquid collection chamber and an aspirator for a burner in a flare system. (See the note above). This would not be similar to the arrangement in the present invention. Since the Miles arrangement is significantly dissimilar from the present arrangement, it would not have been obvious to one of ordinary skill in the art to place the superheater of Miles before the burner in Anderson.

Additionally, as stated above, it is untenable to combine Anderson and Miles together to attempt to achieve the claims of the present invention. It is also untenable to combine Miles with Anderson for the same reason that Miles can not be combined with Choi--they are technically diametrically opposed in their methodology because Anderson CONDENSES virtually all of the effluent while Miles seeks to VAPORIZE virtually all of the effluent. What isn't really quantified anywhere in these patents, is that the bulk of the effluent is water or steam depending on how much of it you vaporize or condense. In almost all applications, that percentage of water, regardless of state, will be above 98% of the total effluent.

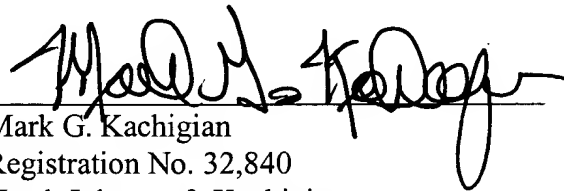
The combination of Anderson in view of Miles, taken together, does not achieve the claims of the present invention and the rejection under §103 (a) is improper. Even assuming the teachings attributed to Anderson and Miles alleged by the Examiner, the combination of the two patents taken together do not achieve the claims of the invention.

Finally, none of the references provide for handling excess non-condensable gases. If the gas quantity is above the required fuel rate (heat) requirement, what happens to it? The present invention provides for thermal oxidation. Additionally, none of the references provide for handling excess condensable contaminated liquids. The present invention provides for thermal oxidation of those as well.

The rejection of Claim 9 under 35 U.S.C. §103 (a) as unpatentable over Choi in view of Miles or Anderson in view of Miles and further in view of Rhodes is respectfully traversed.

It is believed the foregoing is fully responsive to the outstanding Office Action. It is believed that the application is now in condition for allowance and such action is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mark G. Kachigian', is written over a horizontal line.

Mark G. Kachigian
Registration No. 32,840
Head, Johnson & Kachigian
228 West 17th Place
Tulsa, Oklahoma 74119
(918) 587-2000
Attorneys for Applicant

Date: April 22, 2005